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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,967	02/09/2004	Deepak V. Ayyagari	SLA1368	2160

56420 7590 09/29/2008

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EXAMINER	
BARQADLE, YASIN M	

ART UNIT	PAPER NUMBER
2153	

MAIL DATE	DELIVERY MODE
09/29/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/775,967	AYYAGARI, DEEPAK V.	
	Examiner	Art Unit	
	YASIN M. BARQADLE	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 08, 2008 has been entered.

Response to Amendment

2. The amendment filed on July 08, 2008 has been fully considered but are not persuasive in view of the new grounds of rejection.

- Claims 17-35 are presented for examination.

Note: this case has been assigned to another Examiner (Barqadle Yasin).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole

would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 17-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rune (U.S. Pub. No. 2001/0029166).

Rune teaches a system for improving Bluetooth networks. (Rune, ¶34).

Nodes in Rune's system discover neighbor nodes by exchanging modified PAGE RESPONSE messages. (Rune, ¶83). The PAGE RESPONSE messages include Device Access Code (DAC) fields that identify senders of these messages. (Rune, ¶25). The PAGE RESPONSE messages can further include Bluetooth unit Addresses (BR_ADDRs) of master nodes of piconets in which the sending units are slave members. (Rune, ¶88).

The nodes in Rune's system use the information in the PAGE RESPONSE messages to determine which nodes to connect to. (Rune, ¶94). For example, a node can request to connect to another node and specify in the request whether it wishes to be a master or a slave node. (Rune, ¶70-78).

As to claim 1, Rune teaches a multiphase method performed by at least a first node of a plurality of nodes in a communication network to determine a central coordinator node for the communication network from among the plurality of nodes, comprising the steps of:

conducting a listening phase wherein the first node listens for an indication that a central coordinator (master) node has already been elected (Rune, ¶70-78);

conducting a discovery phase after the listening phase wherein the first node transmits its node identity (DAC of sender in PAGE RESPONSEs) and receives from other nodes node identities of other nodes that have transmitted their node identities (BR_ADDRs of master nodes or DAC of sender in PAGE RESPONSEs) (Rune, ¶25, 83, 88);

conducting an election phase after the discovery phase wherein the first node transmits a list of discovered node identities (BR_ADDRs of master nodes in PAGE RESPONSEs) received by the first node from other nodes during the discovery phase, receives from other nodes lists (BR_ADDRs of master nodes in PAGE RESPONSEs) of discovered node identities received by other nodes during the discovery phase and generates topological data (BR_ADDRs of master nodes and any other data listed in ¶84-93) based at least in part on information in the transmitted and receives lists (Rune, ¶25, 84-93); and

conducting a confirm phase after the election phase wherein the first node selectively transmits an indication that the first node is the central coordinator (master) node based at least in part on analysis of the topological data (including BR_ADDRs of master nodes) (Rune, ¶70-78, 84-94).

Althoug Rune teaches the invention as explained above; Rune is silent regarding a predetermined duration after a listening phase to conduct a

discovery phase and a predetermined duration after a discovery phase to conduct an election phase.

Nonetheless, these features are well known in the art and would have been obvious to one ordinary skill in the art at the time of the invention to conduct a discovery phase of predetermined duration immediately after a listening phase and, and then to conduct an election phase of predetermined duration immediately after the discovery phase as suggested by Rune "A unit adapted to communicate according to the Bluetooth specification and wanting to discover neighbouring units also adapted to communicate according to the Bluetooth specification, neighbouring meaning within radio coverage of the first unit, will repeatedly transmit according to well specified timing and frequency sequences, INQUIRY messages and listen for INQUIRY RESPONSE messages, which are optional." (See paragraph 21 and steps 800-812). One ordinary skill in the art would use the predetermined duration as explained above to ensure the discovery of all possible nodes that can act as a master within a predetermined timeout period.

As to claim 18, Rune teaches that when the first node transmits an indication that the first node is the central coordinator (master) node the first node schedules access on the communication network by other (slave) nodes (Rune, ¶8, 70-78).

As to claim 19, Rune teaches that when the first node does not transmit an indication that the first node is the central coordinator (master) node the first node accesses the communication network on a schedule determined by another (master) node that has been elected the central coordinator (master) node (Rune, ¶8, 70-78).

As to claim 20, Rune teaches that the first node transitions between phases in response to timers on the first node (Rune, ¶7).

As to claim 21, Rune teaches that the transmitted list includes a node classification (by BR_ADDR or DAC) of the first node and the received lists include node classifications of other nodes (by BR_ADDR or DAC) (Rune, ¶25, 83, 88).

As to claim 22, Rune teaches that the topological data comprises a table having entries for other nodes from which the first node has received lists of discovered node identities, and wherein each entry includes a node identity (DAC) of another node from which the first node received the list and discovered node identities (BR_ADDRs of master nodes) from the list (Rune, ¶25, 84-93).

As to claim 23, Rune teaches that each entry further includes a node classification (DAC) of another node from which the first node received the list (Rune, ¶25, 84-93).

As to claim 24, Rune teaches that the analysis of the topological data comprises a comparison of node identities (Rune, ¶84-94).

As to claim 25, Rune teaches that the analysis of the topological data comprises a comparison of node classifications (Rune, ¶84-94).

As to claim 26, Rune teaches that the first node selectively receives an indication that another node is the central controller (master) node (Rune, ¶70-78).

As to claim 27, Rune teaches a multiphase method performed by at least a first node of a plurality of nodes in a communication network to determine a central coordinator node for the communication network from among the plurality of nodes, comprising the steps of:

conducting a listening phase wherein the first node listens for an indication that a central coordinator (master) node has already been elected (Rune, ¶70-78);

conducting a discovery phase after the listening phase wherein the first node transmits a discover type message including its node identity (DAC of sender in PAGE RESPONSEs) (Rune, ¶25, 83, 88);

conducting an election phase after the discovery phase wherein the first node receives from other nodes elect type messages including lists of discovered node identities (BR_ADDRs of master nodes in PAGE RESPONSEs) received by other nodes during the discovery phase and generates topological data (BR_ADDRs of master nodes and any other data listed in ¶84-93) based at least in part on information in the received lists (Rune, ¶25, 84-93); and

conducting a confirm phase after the election phase wherein the first node selectively transmits a confirm type message indicating that the first node is the central coordinator (master) node based at least in part on analysis of the topological data (including BR_ADDRs of master nodes) (Rune, ¶70-78, 84-94).

Although Rune teaches the invention as explained above, Rune is silent regarding a predetermined duration after a listening phase to conduct a discovery phase and a predetermined duration after a discovery phase to conduct an election phase.

Nonetheless, these features are well known in the art and would have been obvious to one ordinary skill in the art at the time of the invention to conduct a discovery phase of predetermined duration immediately after a listening phase and, and then to conduct an election phase of predetermined duration immediately after the discovery phase as suggested by Rune "A unit adapted to communicate according to the Bluetooth specification and wanting to discover neighbouring units also adapted to communicate according to the Bluetooth specification, neighbouring meaning within radio coverage of the first

unit, will repeatedly transmit according to well specified timing and frequency sequences, INQUIRY messages and listen for INQUIRY RESPONSE messages, which are optional." (See paragraph 21 and steps 800-812). One ordinary skill in the art would use the predetermined duration as explained above to ensure the discovery of all possible nodes that can act as a master within a predetermined timeout period.

As to claim 28, Rune teaches that when the first node transmits an indication that the first node is the central coordinator (master) node the first node schedules access on the communication network by other (slave) nodes (Rune, ¶8, 70-78).

As to claim 29, Rune teaches that when the first node does not transmit an indication that the first node is the central coordinator (master) node the first node accesses the communication network on a schedule determined by another (master) node that has been elected the central coordinator (master) node (Rune, ¶8, 70-78).

As to claim 30, Rune teaches that the first node transitions between phases in response to timers on the first node (Rune, ¶7).

As to claim 31, Rune teaches that the transmitted list includes a node classification (by BR_ADDR or DAC) of the first node and the received lists include node classifications of other nodes (by BR_ADDR or DAC) (Rune, ¶25, 83, 88).

As to claim 32, Rune teaches a multiphase method performed by at least a first node of a plurality of nodes in a communication network to determine a central coordinator node for the communication network from among the plurality of nodes, comprising the steps of:

starting a listening phase wherein the first node sets a listening phase timer and listens for an indication that a central coordinator (master) node has already been elected (Rune, ¶7, 70-78);

staring a discovery phase when the listening phase timer expires wherein the first node sets a discovery phase timer and transmits its node identity (DAC of sender in PAGE RESPONSEs) (Rune, ¶7, 25, 83, 88);

starting an election phase when the discovery phase timer expires wherein the first node sets an election phase timer, receives from other nodes lists of discovered node identities (BR_ADDRs of master nodes in PAGE RESPONSEs) received by other nodes during the discovery phase and generates topological data (BR_ADDRs of master nodes and any other data listed in ¶84-9) based at least in part on information in the lists (Rune, ¶7, 25, 84-93); and

starting a confirm phase when the election phase timer expires wherein the first node selectively transmits an indication that the first node is the central coordinator (master) node based at least in part on analysis of the topological data (BR_ADDRs of master nodes) (Rune, ¶7, 70-78, 94).

Although Rune teaches the invention as explained above, Rune is silent regarding a phase time limit after a listening phase to conduct a discovery phase and phase time limit after a discovery phase to conduct an election phase.

Nonetheless, these features are well known in the art and would have been obvious to one ordinary skill in the art at the time of the invention to use listening, discovery and election phase timers that enforce phase time limits as suggested by Rune "A unit adapted to communicate according to the Bluetooth specification and wanting to discover neighbouring units also adapted to communicate according to the Bluetooth specification, neighbouring meaning within radio coverage of the first unit, will repeatedly transmit according to well specified timing and frequency sequences, INQUIRY messages and listen for INQUIRY RESPONSE messages, which are optional." (See paragraph 21 and steps 800-812). One ordinary skill in the art would use a phase time limit as explained above to ensure the discovery of all possible nodes that can act as a master within a predetermined timeout period.

As to claim 33, Rune teaches that when the first node transmits an indication that the first node is the central coordinator (master) node the first node schedules access on the communication network by other (slave) nodes (Rune, ¶8, 70-78).

As to claim 34, Rune teaches that when the first node does not transmit an indication that the first node is the central coordinator (master) node the first node accesses the communication network on a schedule determined by another (master) node that has been elected the central coordinator (master) node (Rune, ¶8, 70-78).

As to claim 35, Rune teaches that the transmitted list includes a node classification (by BR_ADDR or DAC) of the first node and the received lists include node classifications of other nodes (by BR_ADDR or DAC) (Rune, ¶25, 83, 88).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone

number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Yasin M Barqadle/
Primary Examiner, Art Unit 2153